

A TRADITION OF WELCOMING FOREIGN SCIENTISTS AND ENGINEERS



It is ironic: many immigrants fleeing Adolf Hitler's and Benito Mussolini's fascist governments in the 1930s and 1940s played critical roles in the development of Los Alamos National Laboratory and of the nuclear weapons that helped bring an end to World War II.

In fact, many immigrants served as senior leaders at the Laboratory. Originally, there were four technical divisions at the Laboratory. (Today there are over 40.) The legendary Nobel Prize-winning physicist Hans Bethe, a German-born immigrant, led the Theoretical Division. Bethe's mother was Jewish, and this had cost him his university position in Hitler's Nazi Germany.

Two of Bethe's group leaders in the Theoretical Division were also refugees. Victor Weisskopf, a gifted Jewish physicist from Vienna, had made valuable contributions to understanding quantum mechanics. At Los Alamos, his group calculated the efficiency of the atomic bombs. Edward Teller, who was also Jewish, lived under communist and fascist dictatorships in his native Hungary. Teller became known as "the father of the hydrogen bomb" and would go on to help create Lawrence Livermore National Laboratory in California. Teller also contributed to writing the famous Einstein-Szilard letter, sent to President Franklin Roosevelt in early August 1939, which provided the initial spark for what would ultimately evolve into the Manhattan Project.

Emilio Segre and Bruno Rossi, both Italian experimental physicists who had escaped Italy's fascist, anti-Semitic government, became group leaders in the Experimental Physics Division. Rossi's work was vital in the development of Fat Man, the first implosion bomb. Segre's work at Los Alamos revealed that plutonium would not work in a gun-assembled nuclear weapon, like Little Boy. This discovery saved valuable time and resources and led to plutonium's use in implosion weapons.

Enrico Fermi, also Italian, was one of the most important physicists at Los Alamos. Fermi was not Jewish but his wife was. He was awarded the Nobel Prize in 1938 and was given permission to travel to Stockholm to receive the prize. He was also permitted to take his wife along but given orders to return to Italy with her immediately afterward. They never did. Once in the United States, Fermi built the world's first nuclear reactor, led the team that initiated the world's first self-sustaining chain reaction, and went on to become a division leader and associate director at Los Alamos.

Thus, from its inception Los Alamos has always welcomed scientists and engineers from foreign countries.

~Alan Carr



Photos: Los Alamos